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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,245	10/16/2003	Parvis Gharagozloo	PT1197 US	9407

7590 02/03/2011  
PURDUE PHARMA L.P.  
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One Stamford Forum  
STAMFORD, CT 06901

EXAMINER
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DESAI, RITA J

ART UNIT	PAPER NUMBER
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1625

MAIL DATE	DELIVERY MODE
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02/03/2011

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/687,245	<b>Applicant(s)</b> GHARAGOZLOO ET AL.	
	<b>Examiner</b> Rita J. Desai	<b>Art Unit</b> 1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

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### **DETAILED ACTION**

Claims 1-24 are pending.

### **Priority**

This application claims priority from U.S. Provisional Application Serial No. 60/419,305, filed on October 17, 2002 and U.S. Provisional Application Serial No. 60/419,600, filed October 18, 2002 is acknowledged.

### **Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

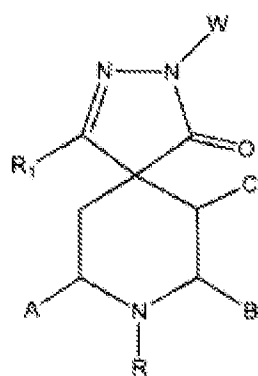
Claims 1-24 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6635653  
Goehring et al .

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

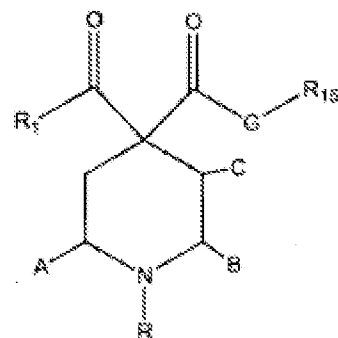
Applicants claims are drawn to a process of making compounds of formula III

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providing a compound of the formula (III)

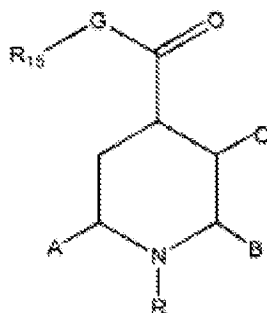


(IV)



(III)

from

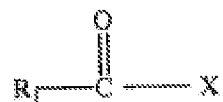


(II)

wherein III is prepared from II

and

formula (II) with a compound having the formula

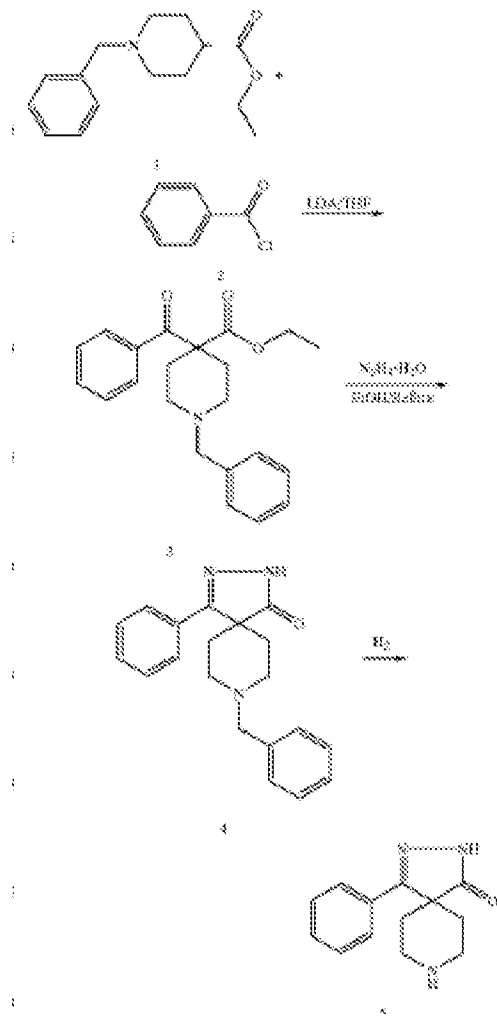


The references teaches the example 1, column 18, which meets all the limitations of the claim.

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**18**  
**EXAMPLE 1**

Synthesis of Spirocyclic Head Groups



This reads on the process of the claimed invention. As R is a W-R2, W is a bond, R2 is a benzyl, R1 is an aryl, A,B,C are all H., for example.

**Claim Rejections - 35 USC § 112**

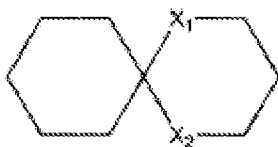
The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-24 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for R to be H or aryl, R<sub>2</sub> H or benzyl and W to be H, A, B and C to be H, does not reasonably provide enablement for all the various substituents such as

R<sub>2</sub> is selected from the group consisting of hydrogen, C<sub>1-18</sub> alkyl, C<sub>3-12</sub> cycloalkyl, C<sub>2-16</sub> alkenyl, amino, C<sub>1-16</sub> alkylamino-, C<sub>3-12</sub> cycloalkylamino-, COOV<sub>1</sub>-, C<sub>1-4</sub> COOV<sub>1</sub>-, cyano, cyanoC<sub>1-16</sub> alkyl-, cyanoC<sub>3-12</sub> cycloalkyl-, NH<sub>2</sub>SO<sub>2</sub>-, NH<sub>2</sub>SO<sub>2</sub>C<sub>1-4</sub> alkyl-, NH<sub>2</sub>SOC<sub>1-4</sub> alkyl-, aminocarbonyl-, C<sub>1-4</sub> alkylaminocarbonyl-, diC<sub>1-4</sub> alkylaminocarbonyl-, benzyl, C<sub>3-12</sub> cycloalkenyl-, a monocyclic, bicyclic or tricyclic aryl or heteroaryl ring, a hetero-monocyclic ring, a hetero-bicyclic ring system, and a spiro ring system of the formula (V):



(V)

wherein X<sub>1</sub> and X<sub>2</sub> are independently selected from the group consisting of NH, O, S and CH<sub>3</sub>; and wherein said alkyl, cycloalkyl, alkenyl, C<sub>1-16</sub> alkylamino-, C<sub>3-12</sub> cycloalkylamino-, or benzyl of R<sub>1</sub> is optionally substituted with 1-3 substituents

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selected from the group consisting of halogen, hydroxy,  $C_{1-10}$  alkyl,  $C_{1-10}$  alkoxy, nitro, trifluoromethyl-, cyano,  $-COOV_1$ ,  $-C_{1-4}COOV_1$ , cyano $C_{1-10}$ alkyl-,  $-C_{1-5}(=O)W_1$ ,  $-C_{1-5}NHS(=O)_2W_1$ ,  $-C_{1-5}NHS(=O)W_1$ , a 5-membered heteroaromatic $C_{0-4}$ alkyl-, phenyl, benzyl, benzyloxy, said phenyl, benzyl, and benzyloxy optionally being substituted with 1-3 substituents selected from the group consisting of halogen,  $C_{1-10}$  alkyl-,  $C_{1-10}$  alkoxy-, and cyano; and wherein said  $C_{3-12}$  cycloalkyl,  $C_{3-12}$  cycloalkenyl, monocyclic, bicyclic or tricyclic aryl, heteroaryl ring, hetero-monocyclic ring, hetero-bicyclic ring system, or spiro ring system of the formula (V) is optionally substituted with 1-3 substituents selected from the group consisting of halogen,  $C_{1-10}$  alkyl,  $C_{1-10}$  alkoxy, nitro, trifluoromethyl-, phenyl, benzyl, phenyloxy and benzyloxy, wherein said phenyl, benzyl, phenyloxy or benzyloxy is optionally substituted with 1-3 substituents selected from the group consisting of halogen,  $C_{1-10}$  alkyl,  $C_{1-10}$  alkoxy, and cyano;

$R_2$  is selected from the group consisting of  $C_{1-8}$  alkyl, 5-8 membered cycloalkyl, 5-8 membered heterocyclic, a 6 membered aromatic or heteroaromatic group; and  $R_1$  being substituted with  $(D)_n$ , wherein n is an integer from 0 to 3, and wherein D is selected from the group consisting of hydrogen,  $C_{1-10}$  alkyl,  $C_{3-12}$  cycloalkyl and halogen, said alkyl or cycloalkyl optionally substituted with an oxo, amino, alkylamino or dialkylamino group;

W is hydrogen,  $C_{1-10}$  alkyl,  $C_{3-12}$  cycloalkyl,  $C_{3-12}$  cycloalkyl $C_{1-4}$ alkyl-,  $C_{1-10}$  alkoxy,  $C_{3-12}$  cycloalkoxy-,  $C_{1-10}$  alkyl substituted with 1-3 halogen,  $C_{3-12}$  cycloalkyl substituted with 1-3 halogen,  $C_{3-12}$  cycloalkyl $C_{1-4}$ alkyl- substituted with 1-3 halogen,  $C_{1-10}$  alkoxy substituted with 1-3 halogen,  $C_{3-12}$  cycloalkoxy- substituted with 1-3 halogen,  $-COOV_1$ ,  $-C_{1-4}COOV_1$ ,  $-CH_2OH$ ,  $-SO_2N(V_1)_2$ , hydroxy $C_{1-10}$ alkyl-, hydroxy $C_{3-10}$ cycloalkyl-, cyano $C_{1-10}$ alkyl-, cyano $C_{3-10}$ cycloalkyl-,  $-CON(V_1)_2$ ,  $NH_2SO_2C_{1-4}$ alkyl-,  $NH_2SOC_{1-4}$ alkyl-, sulfonylamino $C_{1-10}$ alkyl-, diaminoalkyl-, -sulfonyl $C_{1-4}$ alkyl, a 6-membered heterocyclic ring, a 6-membered heteroaromatic ring, a 6-membered heterocyclic $C_{1-4}$ alkyl-, a 6-membered heteroaromatic $C_{1-4}$ alkyl-, a 6-membered aromatic ring, a 6-membered aromatic $C_{1-4}$  alkyl-, a 5-membered heterocyclic ring optionally substituted with an oxo or thio, a 5-membered heteroaromatic ring, a 5-membered heterocyclic $C_{1-4}$ alkyl- optionally substituted with an oxo or thio, a 5-membered heteroaromatic $C_{1-4}$ alkyl-,  $-C_{1-5}(=O)W_1$ ,  $-C_{1-5}(=NH)W_1$ ,  $-C_{1-5}NHC(=O)W_1$ ,  $-C_{1-5}NHS(=O)_2W_1$ ,  $-C_{1-5}NHS(=O)W_1$ , wherein  $W_1$  is hydrogen,  $C_{1-10}$  alkyl,  $C_{3-12}$  cycloalkyl,

. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is “undue”. These factors include 1) the breadth of the claims, 2) the nature of the invention, 3) the state of the prior art, 4) the level of one of ordinary skill, 5) the level of predictability in the art, 6) the amount of direction provided by the inventor, 7) the existence of working examples, and 8) the quantity of experimentation needed to make or use the invention based on the content of the disclosure. In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

**1) The breadth of the claims:** The instant claims encompass a process of making spiro compounds of a very large scope . See description above.

**2) The nature of the invention:** The invention is a process of making compounds of formula IV.

**3) The state of the prior art:**

As stated in the preface to a recent treatise:

"Most non-chemists would probably be horrified if they wereto learn how many attempted syntheses fail, and how inefficient research chemists are. The ratio of successful to unsuccessful chemical experiments in a normal research laboratory is far below unity, and synthetic research chemists, in the same way as most scientists, spend most of their time working out what went wrong, and why. Despite the many pitfalls lurking in organic synthesis, most organic chemistry textbooks and research articles do give the impression that organic reactions just proceed smoothly and that the total synthesis of complex natural products, for instance, is maybe a labor-intensive but otherwise undemanding task. In fact, most syntheses of structurally complex natural products are the result of several years of hard work by a team of chemists, with almost every step requiring careful optimization. The final synthesis usually looks quite different from

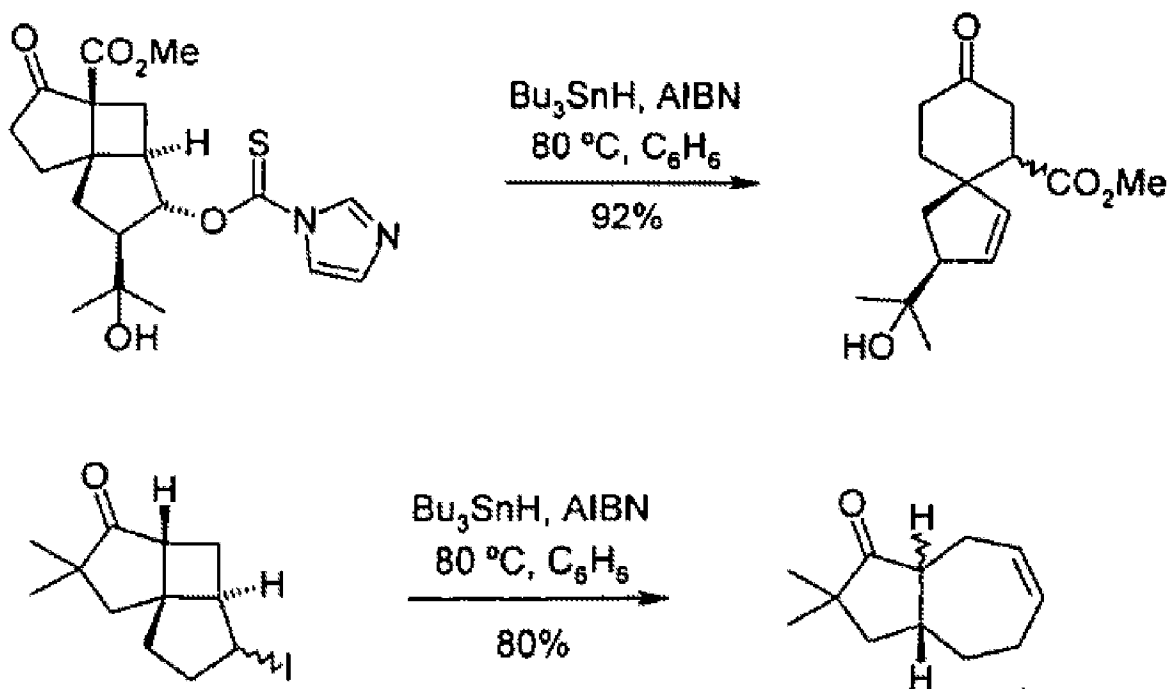


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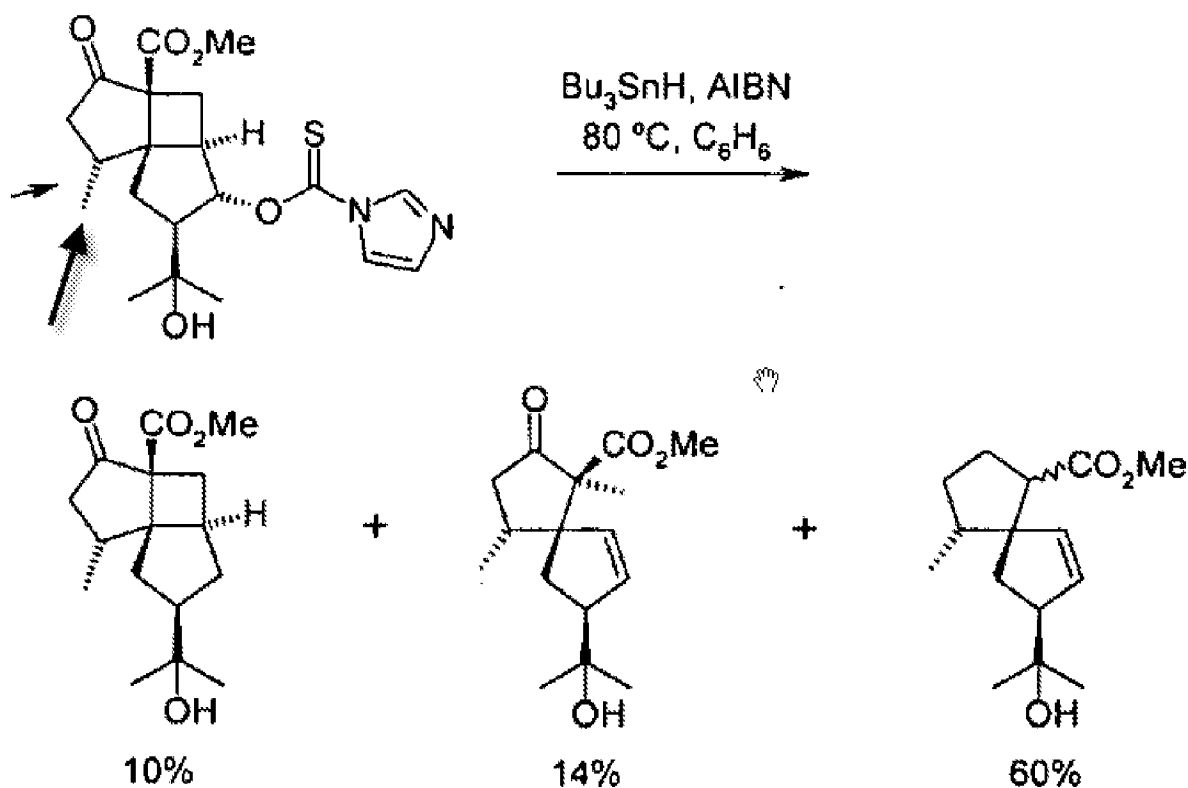
that originally planned, because of unexpected difficulties encountered in the initially chosen synthetic sequence. Only the seasoned practitioner who has experienced for himself the many failures and frustrations which the development (sometimes even the repetition) of a synthesis usually implies will be able to appraise such work .....Chemists tend not to publish negative results, because these are, as opposed to positive results, never definite (and far too copious) ..... " Dorwald F. A.

Side Reactions in Organic Synthesis, 2005, Wiley: VCH, Weinheim pg. IX of Preface.

Dorwald on page 8 and 9 also clearly shows an example with a spiro compounds, showing how different substituents effects the products.



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This example clearly shows the effect of substituents on the starting material.

**4) The level of one of ordinary skill:** The ordinary artisan is highly skilled.

**5) The level of predictability in the art:-** From the above state of the art it can be seen that the process of making is unpredictable.

**6) The amount of direction provided by the inventor:** The inventor provides very little direction in the instant specification. There is only one example with R, R<sub>2</sub> and A, B, C are H and R<sub>2</sub> is a benzyl. No other examples with all the various substituents and combinations is given.

**7) The existence of working examples:** The instant specification has only one example.

**8) The quantity of experimentation needed to make or use the invention based on the content of the disclosure:** Since there are no working examples, the amount of experimentation is undue and burdensome.

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Taking the above eight factors into consideration, it is not seen where the instant specification enables the ordinary artisan to make and/or use the instantly claimed invention.

Genetech Inc Vs Nova Nordisk 42 USPQ 2d 1001.

“A patent is not a hunting license. It is not a reward for search but compensation for its successful conclusion and patent protection is granted in return for an enabling disclosure of an invention, not for vague intimations of general ideas that may or may not be workable.”

MPEP 2164.01(a) states, "A conclusion of lack of enablement means that,

based on the evidence regarding each of the above factors, the specification, at the time the application was filed, would not have taught one skilled in the art how to make and/or use the full scope of the claimed invention without undue experimentation. In re Wright, 999 F.2d 1557,1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993)." That conclusion is clearly justified here. Thus, undue experimentation will be required to practice Applicants' invention.

### **Conclusion**

Claims 1-24 are rejected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rita J. Desai whose telephone number is 571-272-0684. The examiner can normally be reached on Monday - Friday, flex time..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres can be reached on 571-272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rita J. Desai/  
Primary Examiner, Art Unit 1625

February 1, 2011.